

REMARKS

Claims 15-20 have been held to define patentable subject matter. Applicants have therefore rewritten Claims 15 and 16 in independent form. Claims 17-20 require no amendment. Applicants submit that Claims 15-20 are in condition for allowance.

Claim 11 has been rejected under 35 U.S.C. §103 over Brace in view of Stücker. Applicants submit that Claim 11 defines patentably over these references for the following reasons.

Stücker discloses a device to be fitted anterolaterally to the lateral side of the column. The device includes a plate 101 with four points 106 that are laterally offset from the receiving means of the rod. Two points 106 are thus anchored at the front of the column, and two points 106 are anchored at the rear of the column. The plate is secured to the vertebrae by screws passing through fastening bores 102.

It should be emphasized that, in the device of Stücker, the fastening bores 102 are near the ends of the plate 101, the points 106 are between the ends of plate 101 and the middle portion of plate 101, and the receiving means of the rod are in the middle portion of plate 101.

To fasten the device of Stücker, it is necessary to use a screwdriver. However, if plate 101 is located rearwardly, the screwdriver cannot reach the screw engaged in fastening bore 102 located near the posterior face of the vertebrae. Therefore, the device of Stücker does not allow positioning of the fastening rod close to the rear portion of the vertebral column.

Claim 11 has been amended to recite that all of the points (9, 10) are

located in the region of the sliding piece including the receiving means. All of the points are also required to be on the interior face of the sliding piece and opposite the receiving means, which are on the exterior face of the sliding piece. Neither embodiment of Stücker shows a device wherein all of the points are located in the recited position.

The above feature enables the points 9 and 10 to be located at the rear portion of the area of the rod receiving means. This feature also allows the rod to be offset near the rear portion of the column when fitted anterolaterally to the vertebral column.

Such positioning is very important in order to be as close as possible to the equilibrium axis of the column, which is located near the posterior face of the column and vertebrae.

There is a pivot axis between adjacent vertebrae, perpendicular to the equilibrium axis and near the posterior face of the column. When the patient bends rearward or forward, there occurs a pivotal movement according to the pivot axis between two adjacent vertebrae.

The closer the rod is to the posterior face of the column, the less force is communicated to the screws and fastening means when the patient bends. Positioning of the rod near the rear portion of the column decreases the force communicated to the fastening means (i.e. the screws and points), and hence improves the durability and stability of the device.

The choice of the two points 9 and 10, instead of a screw (as is shown in Stücker), enables the surgeon to offset the rod rearwardly, since he does not need to access an inconveniently located screw with a screwdriver.

The invention therefore provides a unique screw which remains fully accessible for a screwdriver when the rod and the device are offset to the rear portion of the column.

Moreover, the head of the screw is directed slightly to the anterior

face of the vertebrae, enabling easy screwing from the anterior face of the column.

Stücker fails to disclose the features recited in Claim 11. Not only would the person skilled in the art not consider Stücker, since that reference does not solve the problems solved by the present invention, but since Stücker does not show all the features recited in Claim 11, the combination of Brace and Stücker would not yield the claimed invention.

Therefore, Applicants submit that Claims 11-14 define a patentable invention over the references. Applicants request reconsideration by the Examiner and early favorable action.